

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/663,482	PROWELL, STACY JACKSON	
	<b>Examiner</b>	<b>Art Unit</b>	
	Albert W. Paladini	2125	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 9/15/03.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>9/15/03</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                              | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

***Reasons for Allowance***

1. The following is an examiner's statement of reasons for allowance: None of the references cited or the art searched disclose or teach alone or in combination the matrix system containing means for obtaining the parent matrix, the means for obtaining the child matrix which is a first moment matrix of the child model where the child model is a sub-model of the parent model, the means for determining an expanded matrix which is a first moment matrix of the child model instantiated within the parent model, the diagonal elements, and the other row elements and the interrelationships of all of these elements as recited in claims 1, 2, 3, 4, 11, and 12. The real world application of the matrix manipulation techniques to optimize markov chain usage models, which are commonly used for software testing, and modeling software engineering processes is explained in the specification on pages 1-3, in addition to the improvement resulting from the development of a more efficient approach to calculate the first row and diagonal elements of the first moment matrix of the transient sub-matrix of the flattened model.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Relevant Prior Art***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Asghar (6347297) discloses matrix methods utilized in speech recognition and relates to combining matrix and vector quantization with selective enhanced processing and neural network post processing to provide efficient and robust speech recognition. A speech recognition system combines Matrix Quantization (MQ) and Vector Quantization (VQ) with Hidden Markov Models (HMMs) and neural network post processing to efficiently utilize processing resources and improve speech recognition performance.

Passova discloses a system and method of software testing which provides mapping functions which relate the elements of a Petri net model to one or more matrices, which can be stored as tables, to permit automatic modeling and testing of software at all three levels of the software development cycle: system requirements, design requirements and implementation requirements, using the same model.

Estep (6766481) discloses a software suitability testing method for commercial software products, involves establishing functional criteria and accordingly generating criteria matrix, to perform suitability tests.

Apuzzo (6986125) discloses methods and apparatus for software testing, and more specifically, to a functional testing and evaluation technique employing an abstraction matrix for facilitating testing and evaluation of complex software components such as an operating system component.

Prowell (Journal Systems Software) discloses an improvement to the markov chain based testing which incorporates Bayesian reliability model.

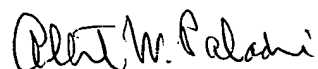
Art Unit: 2125

3. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

April 27, 2006



Albert W. Paladini  
Primary Examiner  
Art Unit 2125